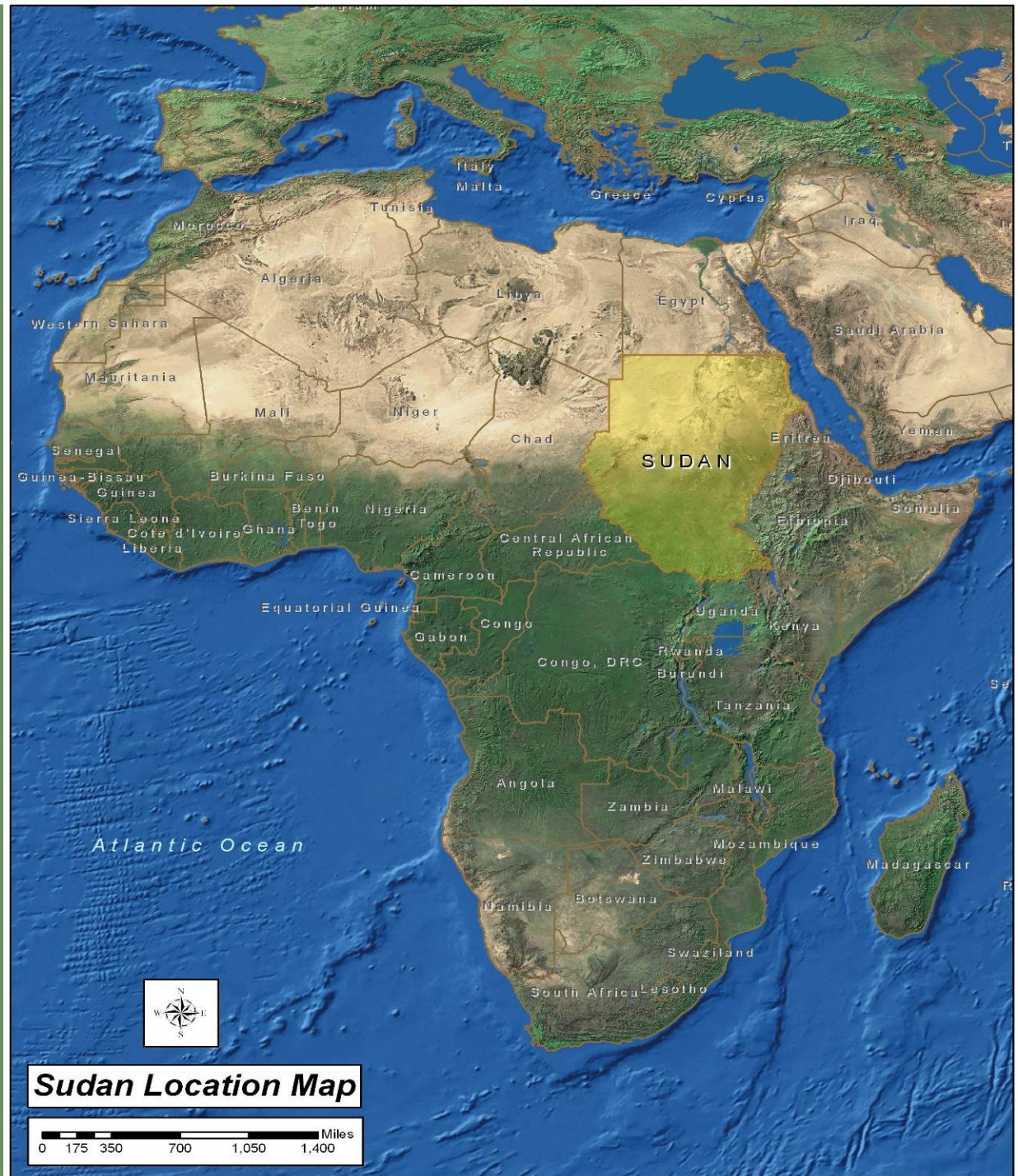


Sudan

- Plagued by internal conflict
- Conflict in Darfur region responsible for tens of thousands of deaths and nearly

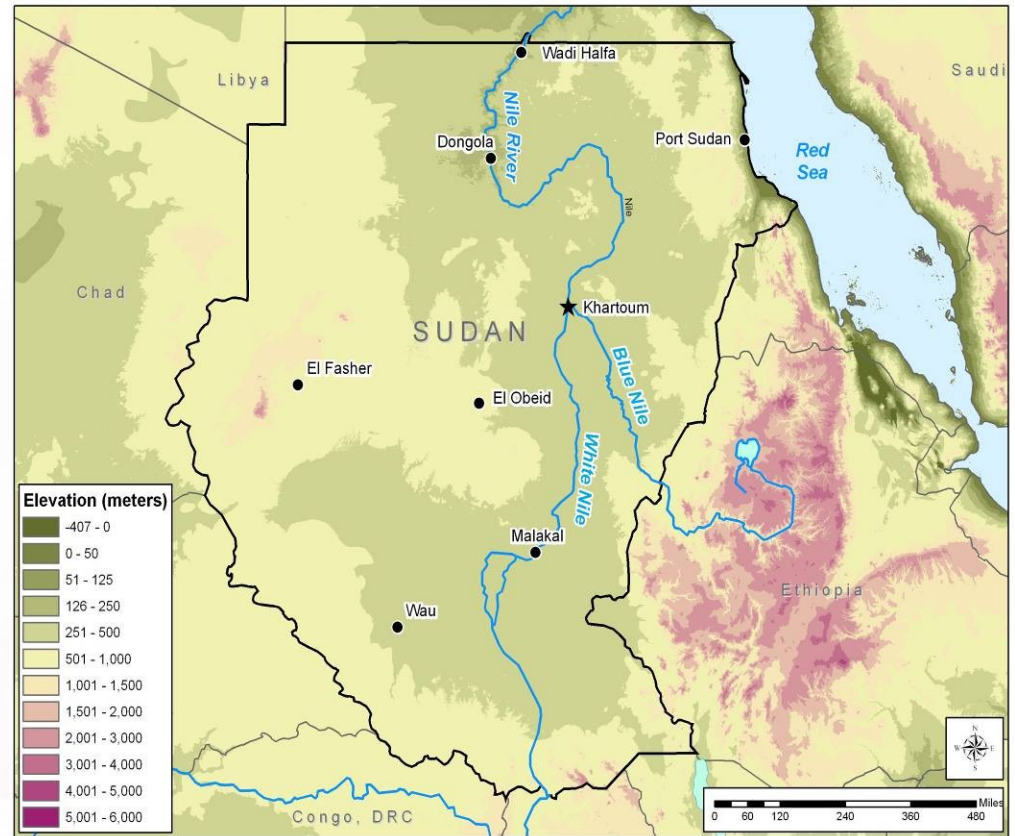


**Where in
the world
is Sudan?**



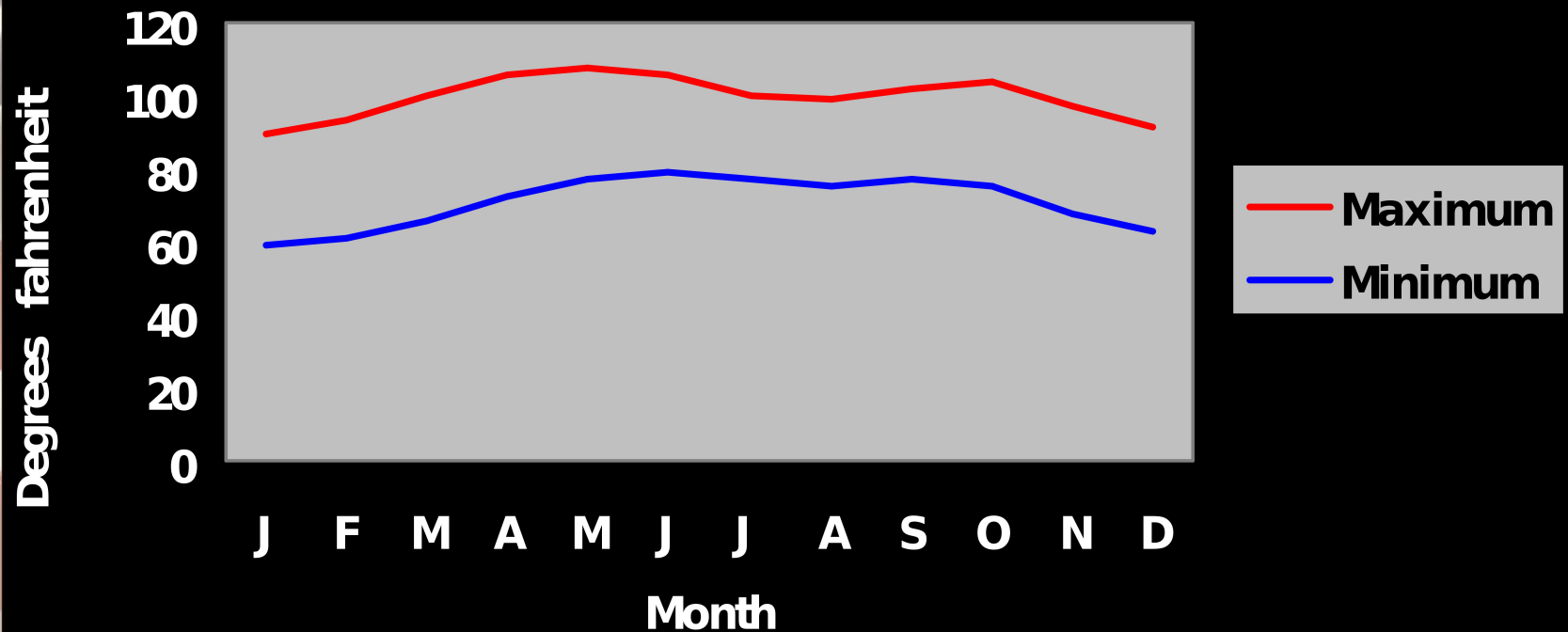
Physical Environment

- **Topography**
 - **Generally flat**
 - **Mountains in far south, northeast, & west**
 - **Desert dominates the north**
- **Climate**
 - **Tropical in south**
 - **Desert in north**
 - **Rainy season varies (Apr - Nov)**



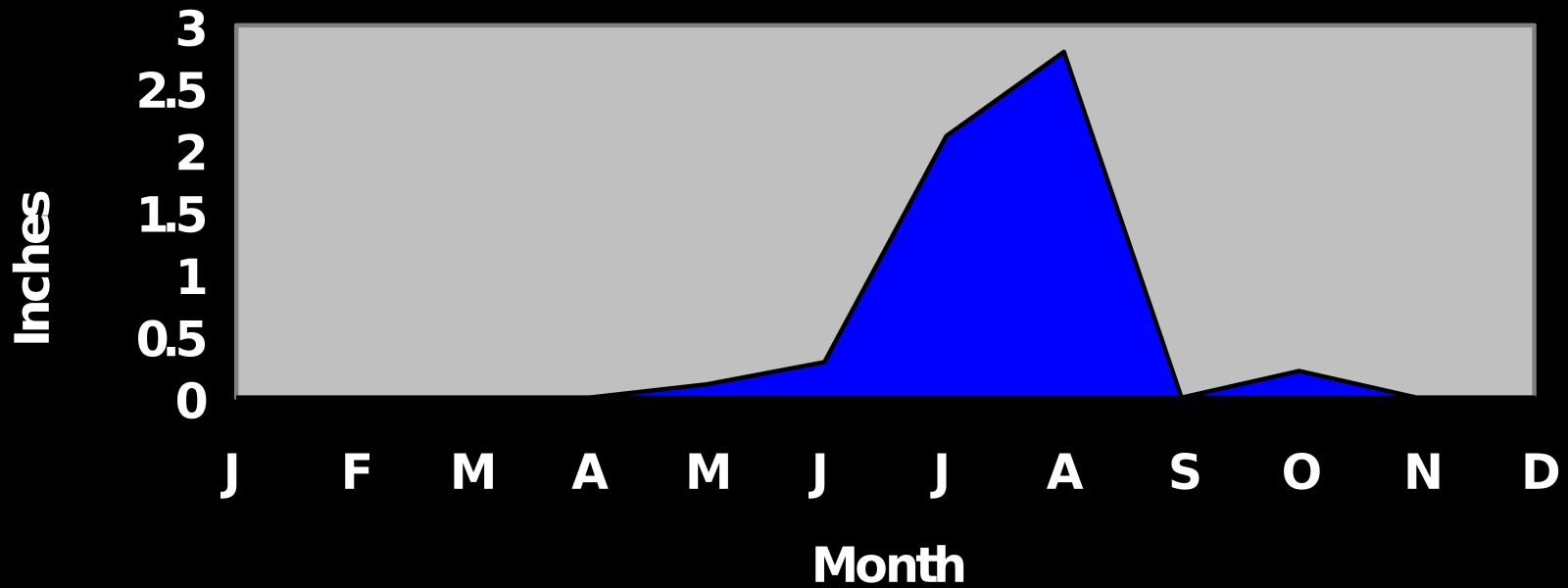
Physical Environment

Average Max/Min Temperature at Khartoum



Physical Environment

Average Total Precipitation in Khartoum



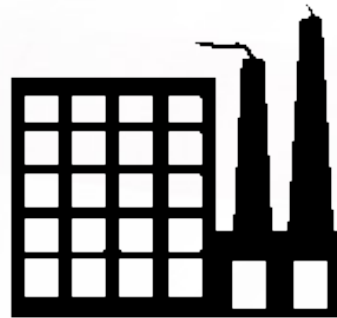
Environmental Health Risks

- **Greatest short-term**
 - Ingestion of food or water contaminated with fecal pathogens.
 - Extreme heat, airborne, dust & sand, and high altitude
- **Greatest long-term**
 - Air contamination in industrial areas
 - Chemical contamination of food & water



Environmental Health Risks

- Air Contamination
 - **LOW RISK** to human health
 - Localized - most significant around Khartoum



- Particulate matter may be high
- Has been an increase in respiratory diseases among locals living near industrial areas

Environmental Health Risks

- Soil Contamination
 - **LOW RISK** to human health
 - Usually localized around industrial facilities
 - Pesticide stockpile leakage
 - Exposure to contaminants is unlikely in the absence of digging or windblown dust



Infectious Disease Risk

- **VERY HIGH RISK** for infectious diseases
- Overall disease risk is among the worst in the world

Infectious Diseases

- Foodborne and Waterborne Diseases
 - **HIGH RISK** = Diarrhea, Hepatitis A, Typhoid/paratyphoid, Hepatitis E
 - **INTERMEDIATE RISK** = Brucellosis, Cholera
- Force Health Protection (FHP) Priorities
 - Deploy appropriate PM personnel and equipment
 - Consume food, water, & ice only from US-approved sources
 - Operate food preparation facilities in accordance with Army doctrine
 - Ensure and enforce proper hand washing facilities near all latrines and dining facilities

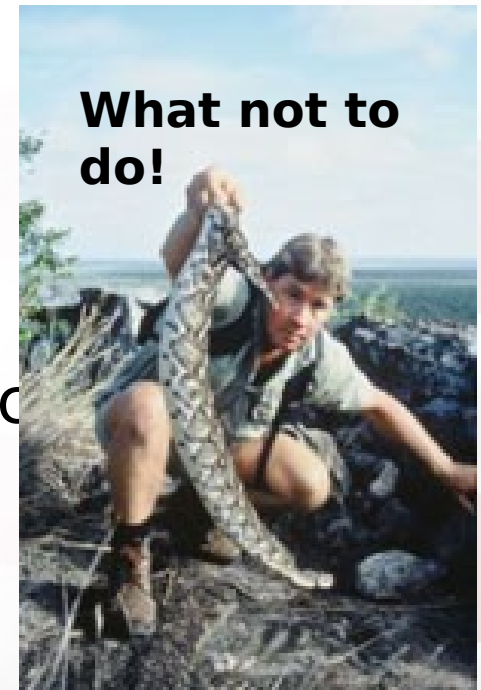
Infectious Diseases Cont.

- Vector-borne Diseases
 - **HIGH RISK** = Malaria, Dengue fever, Trypanosomiasis
 - **INTERMEDIATE RISK** = Chikungunya, Crimean-Congo hemorrhagic fever, Leishmaniasis, Onyong-nyong, Rickettsioses, Rift Valley fever, Sand fly fever, Sindbis virus, Typhus, West Nile fever, Yellow fever
- FHP Priorities
 - Use DEET on all exposed skin
 - Treat field uniforms with permethrin
 - Use bed nets in field conditions, treat with permethrin
 - **Enforce malaria chemoprophylaxis as appropriate**



Infectious Diseases Cont.

- Animal-contact Diseases
 - **INTERMEDIATE RISK** = Anthrax, Q-fever, Rabies
- FHP Priorities
 - Avoid animal contact
 - No mascots
 - Report all animal bites and scratches



Infectious Diseases Cont.

- Sexually Transmitted Diseases
 - **HIGH RISK** = Hepatitis B
 - **INTERMEDIATE RISK** = gonorrhea/chlamydia, HIV/AIDS
- FHP Priorities
 - Avoid sexual contact
 - Use latex condoms if sexual active



Infectious Diseases Cont.

- Water-contact Diseases
 - **HIGH RISK** = schistosomiasis
 - **INTERMEDIATE RISK** = leptospirosis
- FHP Priorities
 - avoid unnecessary contact with lakes, rivers, streams, and other surface water

There will not be a sign like

WARNING!

**LEPTOSPIROSIS
HEALTH HAZARD**

FRESH WATER STREAMS AND MUD
POSSIBLY POLLUTED WITH BACTERIA

SWIM, BOAT,
OR HIKE AT YOUR OWN RISK

Infectious Diseases Cont.

- Respiratory Diseases
 - **HIGH RISK** = Meningococcal meningitis
 - **INTERMEDIATE RISK** = tuberculosis
- FHP Priorities
 - Tuberculin skin test before and after deployment (IAW Army Personnel Policy Guidance, Chapter 7)
 - Avoid overcrowding, 72sqft/person and head to toe sleeping arrangement
 - Avoid close contact with local population

Hazardous Animals & Plants

- Animals
 - Snakes, scorpions, spiders
- Plants
 - May have thorns or toxic resin
- FHP Priorities
 - Do not handle animals
 - Shake out boots, clothing, & bedding
 - Do not touch, chew, eat, or burn unfamiliar plants



SUMMARY

- Physical Environment
- Environmental Health Risks
- Infectious Diseases = **VERY HIGH RISK**
- Hazardous Animals and Plants
- FHP measures are simple and effective
 - Use and Enforce
 - Will conserve the fighting strength

